Jurnal Aisyah: Jurnal Ilmu Kesehatan

Volume 9, Issue 2, September 2024, p. 1319–1328
ISSN 2502-4825 (print), ISSN 2502-9495 (online)

The relationship between deep breathing relaxation techniques and reducing anxiety and patient quality of life heart failure undergoing treatment at Sidikalang Regional Public Hospital

Perak Maruli Asi Roha Hutagalung

Kemenkes Poltekkes Medan Prodi D-III Keperawatan Dairi, Indonesia

ABSTRACT

Cardiovascular disease (CVDs) is the main cause of death globally, dying around 17.9 million people every year WHO (World Health Organization. In Asia and the Pacific Islands, deaths that occur due to cardiovascular disease and congenital cardiovascular disease reach 33% of all deaths A study conducted by Framingham stated that heart failure in men (per 1000 incidents) increased from 3 at the age of 50 - 59 years to 27 at the age of 80 - 89 years, and heart failure in women was measured to be one third lower than in men. 2018 Riskedas data revealed 3 provinces with the highest prevalence of heart disease, namely North Kalimantan province 2.2%, DIY and Gorontalo 2%, followed by Southeast Sulawesi 1.9%, North Sulawesi 1.8% then Aceh 1.6%. West Sumatra 1.6%, DKI Jakarta 1.6%, West Java 1.6%, East Java 1.6% and Central Java 1.6%. Stress is one of the triggers for hypertension, both in the elderly, young adults and middle age. The body's reactions due to stress include shortness of breath, heart palpitations and cold sweat. Untreated anxiety can lead to irrational behavior, conflict, disobedience, fear, inability to carry out daily activities and feelings of fear of death. Deep breathing exercises have many benefits, namely that they are easy to do independently, require no money and are practical. An initial survey conducted at the Sidikalang Regional General Hospital of patients who experienced heart failure and were undergoing treatment, there were 3 patients who said that the patients experienced stress and anxiety about their illness. Research purposes: to determine the level of anxiety before and after, quality of life before and after and to determine the relationship between breathing relaxation techniques in reducing anxiety and the quality of life of heart failure patients at Sidikalang Hospital. The sample in the study was 60 people. Output: Scientific article accredited by Sinta 2. The TKT of this research is TKT 3. Results: 1) Characteristics of respondents: the majority of respondents are 55-74 years old, 39 people (65%), the majority have a high school education, 45 people (75%), the majority work as farmers, 42 people (70%), the majority are male, 35 people (58.34). %). 2) The majority of patients' anxiety levels before being given breathing relaxation techniques were moderate, 28 people (46.67%). 3) The majority of patients' anxiety level after being given the breath relaxation technique was moderate 47 people (78.33%), 4) The majority of patients' quality of life before being given the breath relaxation technique was poor 49 people (81.66%), 5) The quality of life of the patient after being given the technique 45 people (75%) had poor breathing relaxation. The Asymp.Sig value is 0.000 < 0.05, meaning that there is a significant relationship between reducing anxiety and quality of life after being given the deep breathing relaxation technique to heart failure patients undergoing treatment at the Sidikalang Regional General Hospital.

Kata kunci: relaxation techniques; anxiety; quality of life; heart failure

Corresponding author: Perak Maruli Asi Roha Hutagalung
Kemenkes Poltekkes Medan Prodi D-III Keperawatan Dairi
Jl. Jamin Ginting KM. 13,5 Kel. Laucih, Kec. Medan Tuntungan Medan
Email: perakhutagalung61@gmail.com

INTRODUCTION

Currently, the disease that is of concern as the number one cause of death in the world is cardiovascular disease. Some cardiovascular diseases include heart failure.(1)Heart failure is an abnormal condition in the structure and function of the heart that prevents the heart from supplying oxygen to the entire body.(2)

In Indonesia, heart and blood vessel disease is one of the main health problems. This disease is the number one cause of death in the world with an estimated increase to reach 23.3 million in 2030. Coronary heart disease (CHD) is a cardiovascular disease caused primarily by narrowing of the coronary blood vessels due to atherosclerosis.(3)

Heart failure is a complex of clinical symptoms resulting from functional and structural myocardial dysfunction that can interfere with the heart's ability to pump blood at a rate sufficient to maintain the metabolic needs of the organ in peripheral tissues. Cardiovascular diseases (CVDs) are the leading cause of death globally, killing approximately 17.9 million people each year WHO (World Health Organization).(4)

In Asia and the Pacific Islands, deaths due to cardiovascular disease and congenital cardiovascular disease reached 33% of all deaths. In 2008 in America, heart disease was the first cause of death with a death toll of around 616 thousand people. WHO stated that the number of heart failure cases in the world increases every year. A study conducted by Framingham stated that heart failure in men (per 1000 incidents) increased from 3 at the age of 50-59 years to 27 at the age of 80-89 years, and heart failure in women was measured to be one third lower than in men.(2)

Non-Communicable Diseases (NCDs) the number one cause of death every year is heart disease. Heart disease is a disease caused by impaired heart and blood vessel function, such as coronary heart disease, heart failure or heart failure, hypertension and stroke.(5)Many heart patients undergo long hospitalization. The length of hospitalization will cause discomfort. The impact is psychological. The psychological impact is like emotions, stress, depression and anxiety. The prevalence of heart disease based on interviews diagnosed by doctors in Indonesia is 1.5% of the total population. Riskedas 2018 data revealed 3 provinces with the highest prevalence of heart disease, namely North Kalimantan province 2.2 percent, DIY and Gorontalo 2 percent. Then followed by Southeast Sulawesi 1.9 percent, North Sulawesi 1.8 percent then Aceh 1.6 percent, West Sumatra 1.6 percent, DKI Jakarta 1.6 percent West Java 1.6 percent, East Java 1.6 percent and Central Java 1.6 percent.(5)

Cardiopulmonary impulses will be continued to the brain by cranial nerves that increase the brain center signal to the heart. Afferent impulses from the brain center will increase the work of the parasympathetic nerves and inhibit the sympathetic nerves, resulting in systemic blood vessel dilation, decreased heart rate, and heart contraction power (6). Several intervention plans have been prepared by researchers to solve the problem of the risk of decreased cardiac output. The first intervention plan is heart care such as monitoring blood pressure, assessing complaints of chest pain, positioning the patient in semi-Fowler / Fowler, providing deep breathing relaxation therapy (6).

Stress is also one of the triggers of hypertension, both in the elderly, young adults and middle age. Stress in the long term will be a predictor of hypertension in the future. Stress can trigger increased body adrenaline, stress will stimulate the sympathetic nerves so that it will increase blood pressure and cardiac output will also increase. Stress occurs because of pressure from the environment on a person so that it stimulates body and psychological reactions. Stress can also trigger increased blood pressure in people with hypertension. Body reactions that occur due to stress include shortness of breath, heart palpitations and cold sweats.(6)

Signs and symptoms of anxiety are irritability, isolation, nervousness, feeling insecure, headache, sweating, vomiting, diarrhea, tingling, shivering, hot flushes, tachypnea, tachycardia, and hypertension. These symptoms result in cognitive impairment characterized by impaired thinking, decision-making, narrowing of perception and concentration. The pathophysiological response of anxiety is caused by the activation of the autonomic nervous system which results in different neuro-endocrine changes in the body. This process ultimately causes an increase in heart rate, blood pressure and an increase in myocardial workload. One of the problems that must be addressed during this period is to reduce the anxiety experienced by the patient.(7)

Anxiety experienced by a person can be caused by threats to physical integrity and threats to the integrity of the body system. Threats to physical integrity are related to decreased ability to perform daily life activities. While threats to the integrity of the body system involve damage to a person's identity, self-esteem, and integrated social function.(8)

Untreated anxiety can lead to irrational behavior, conflict, noncompliance, fear, inability to perform daily activities and fear of death.(9)Deep breathing exercises have many benefits, namely easy to do independently, cost-free and practical. Other benefits that can be obtained from deep breathing exercises are increasing maximum alveolar inflation and muscle relaxation, relieving anxiety, eliminating ineffective and uncoordinated respiratory muscle activity patterns, slowing the respiratory rate and reducing the work of breathing. Slow, relaxed and rhythmic breathing also helps control anxiety that occurs.(10)

Problems that arise can indicate clinical deterioration and decreased quality of life. Quality of life must be seen from all aspects of life, and can be known by asking the patient directly (4). According to the World Health Organization Quality of Life (WHOQOL), quality of life is a function that includes physical health such as daily activities, sleep anxiety, illness, energy, mobility, work ability, rest needs, and mental health. Positive and negative emotions, social relationships such as social support, personal relationships and environmental conditions, freedom, physical integrity, environmental activities, safety, financial resources, health and social welfare.

The results of the research that has been conducted obtained the results of the analysis of 53 respondents with poor quality of life as many as 11 respondents (21%). as many as 49 respondents with heart failure have poor quality of life. The main symptoms and factors that can affect the quality of life of heart failure patients are stress, sleep disorders and fatigue. Patients who experience stress can worsen their disease condition and can reduce their quality of life in the psychological dimension, the reactions given are usually anxiety and discomfort.(11)

The initial survey that was conducted at Sidikalang Regional General Hospital on patients who experienced heart failure and were undergoing treatment, there were 3 patients who said that the patients experienced stress and anxiety about their illness and felt that their quality of life was not good, so from the data above the researcher was interested in conducting a study entitled the relationship between deep breathing relaxation techniques and reducing anxiety with the quality of life of heart failure patients undergoing treatment at Sidikalang Regional General Hospital in 2023.

RESEARCH METHOD

Types of research

This study is a quantitative study, using a quasi-experimental design with one group pretest-posttest design. This study was conducted by giving a pretest (initial observation) before the intervention was given, after the intervention was given, then a posttest (final observation) would be conducted again. After the intervention was carried out, changes were expected to occur by comparing the pretest and posttest blood pressure (23).

Pretest	Intervention	Posttest
01	X	02

Location and Time of Research

The location of the research was conducted, address: Jalan Rumah Sakit Umum Daerah No.19, Batang Beruh, Sidikalang, Batang Beruh, Sidikalang, Dairi Regency, North Sumatra 22212. The research period was carried out from April 2023 until completion, starting from the initial survey, literature search, data collection and data processing and analysis, and preparation of research results.

Population and Sample

Population is a generalization area consisting of objects and subjects that have certain qualities and characteristics that are determined by researchers to be studied and then conclusions drawn. The population in this study were heart failure patients undergoing treatment at Sidikalang Regional General Hospital. (19). Sampling in this study used the accidental technique, namely sampling using a sampling determination technique with certain considerations of 60 samples.

Conceptual Framework

A conceptual framework is a relationship or connection between one concept and another concept or one variable and another variable.

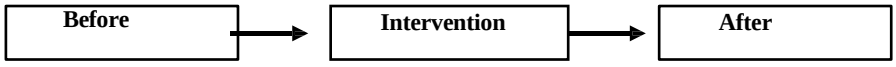

Figure 3.1. Conceptual Framework

Operational Definition and Measurement Aspects

Operational definition is the limitation of the scope of the variables observed or studied. The measurement aspect is the rules that include the methods and measuring instruments, measurement results, categories, and measurement scales used to assess variables. The WHOQOL-Bref questionnaire consists of 26 questions. The 26 questions are about general quality of life. Each question is given a value of 1 to 5 and a higher value is a better quality of life.

Data Processing and Analysis

Data processing

a. Editing (Data checking): Editing is done when the questionnaire has been completed by the respondent. All questionnaires are checked again, whether all questions have been answered properly.

b. Coding (Data coding): Data in the form of sentences or letters is converted into numeric or numerical data in the master table.

c. Data tabulation: arranging the data that has been prepared in a master table and then analyzing it by the researcher using SPSS.

Data analysis

a. Univariate analysis: Take into account each variable studied, namely the dependent variables of deep breathing relaxation techniques and anxiety and the independent variable of quality of life.

b. Bivariate analysis: To determine the relationship between deep breathing relaxation techniques reducing anxiety with quality of life in heart failure patients undergoing treatment at Sidikalang Regional General Hospital. Bivariate analysis is used to show the relationship between two variables in the form of a table (chi-square):

1. If the Asymp.Sig value < 0.05, there is a significant relationship between deep breathing relaxation techniques to reduce anxiety and quality of life in heart failure patients undergoing treatment at Sidikalang Regional General Hospital.
2. If the Asymp.Sig value < 0.05, there is no significant relationship between deep breathing relaxation techniques to reduce anxiety and quality of life in heart failure patients undergoing treatment at Sidikalang Regional General Hospital.

RESULTS OF STUDY

Univariate Analysis

Univariate analysis was conducted to describe the characteristics of the variables, frequency distribution and percentage of the variables studied, namely respondent characteristics, pretest and post-posttest levels of respondent anxiety, general quality of life and quality of life based on blood pressure in the relationship between deep breathing relaxation techniques reducing anxiety and the quality of life of heart failure patients undergoing treatment at Sidikalang Regional General Hospital.

a. Patient Anxiety Level

1) Patient anxiety level before being given deep breathing relaxation techniques

The results show the level of patient anxiety based on the distribution of the questionnaire before being given the deep breathing relaxation technique, question number 1 the highest score was "heavy" as many as 42 (70%), in question number 2 the highest score was the "heavy" option as many as 49 (81.67%), question number 3 the highest score was the "heavy" option as many as 40 (66.67%), question number 4 the highest score was the "heavy" option as many as 43 (71.67%), question number 5 the highest score was the "heavy" option as many as 33 (55%), question number 6 the highest score was the "heavy" option as many as 48 (80%), question number 7 the highest score was the "heavy" option as many as 35 (58.33%), question number 8 the highest score was the "moderate" option as many as 30 (50%), question number 9 the highest score was the "heavy" option as many as 38 (63.33%), in question number 10 the highest score was the "heavy" option as many as 38 (63.33%), question number 11 the highest score was the "moderate" option as many as 43 (71.67%), question number 12 the highest score was the “heavy” option as many as 32 (53.33%), question number 13 the highest score was the “heavy” option as many as 50 (83.33%), question number 14 the highest score was the “heavy” option as many as 45 (75%).

2) Patient anxiety levels after being given deep breathing relaxation techniques

Based on table 4.3 above shows the level of patient anxiety based on the distribution of the questionnaire after being given deep breathing relaxation techniques, question number 1 the highest score was "moderate" as many as 3 (58.33%), in question number 2 the highest score was the choice of "moderate" as many as 55 (91.67%), question number 3 the highest score was the choice of "moderate" as many as 52 (86.67%), question number 4 the highest score was the choice of "moderate" as many as 49 (81.67%), question number 5 the highest score was the choice of "moderate" as many as 51 (85%), question number 6 the highest score was the choice of "moderate" as many as 53 (88.33%), question number 7 the highest score was the choice of "moderate" as many as 50 (83.33%), question number 8 the highest score was the choice of "moderate" as many as 48 (80%), question number 9 the highest score was the choice of "moderate" as many as 54 (90%), question number 10 the highest score was the choice of "moderate" as many as 57 (95%), question number 11 the highest score was the choice of "moderate" as many as 54 (90%), question number 12, the highest score was the "moderate" option as many as 53 (88.33%), question number 13, the highest score was the "moderate" option as many as 51 (85%), question number 14, the highest score was the "moderate" option as many as 60 (100%).

b. General Quality of Life

The following are the results of collecting questionnaires before being given deep breathing relaxation techniques regarding the patient's quality of life:

1) Patient satisfaction with their health

T**able 4.4. Frequency Distribution of Questionnaire Answers Based on Patient Satisfaction with Their Health**

Quality of Life	f	Percentage (%)
Very unsatisfactory	15	25
Not satisfactory	45	75
Mediocre	0	10
Satisfying	0	0
Very satisfactory	0	0
Total	**60**	**100**

Table 4.4 above shows that the general quality of life of patients based on patient satisfaction with their health is mostly unsatisfactory, as many as 45 people (75%).

2) Experiencing Discomfort in the last 2 weeks

The results showed that the quality of life of patients in general based on discomfort in the last 2 weeks seen from physical pain preventing activities, the majority in moderate numbers as many as 38 people (63.33%). Seen from needing medical therapy to carry out daily activities, the majority in moderate numbers as many as 40 people (66.66%), how far they enjoy life, the majority in small numbers as many as 35 people (58.33%), feeling life is meaningful, the majority in small numbers as many as 27 people (45%), how well they can concentrate, the majority in moderate numbers as many as 38 people (63.33%), feeling safe in daily life, the majority in small numbers as many as 25 people (41.67%), healthy environment where the elderly live (related to facilities and infrastructure) the majority in moderate numbers as many as 38 people (63.33%).

3) Ability to Perform Daily Activities

The results show the quality of life of patients in general based on the ability to carry out daily activities in the last 2 weeks as seen from having energy for daily activities, the majority is a little as much as 28 (46.67%), being able to accept the appearance of the body, the majority is moderate as much as 30 people (50%), having enough money to meet the needs of the majority is a little as much as 21 people (35%), getting information in daily life, the majority is often as much as 31 people (51.67%), having recreational opportunities, the majority is a little as much as 21 people (35%), the ability to socialize, the majority is moderate as much as 25 people (41.67%).

4) Satisfaction with Self-Ability in the Last 2 Weeks

The results show the quality of life of patients in general based on satisfaction with their abilities in the last 2 weeks, seen from satisfaction with sleep quality, the majority are unsatisfactory, as many as 39 people (65%), satisfaction with carrying out daily life activities, the majority are unsatisfactory, as many as 49 people (81.67%), satisfaction with the ability to do activities, the majority are unsatisfactory, as many as 39 people (65%), satisfaction with yourself, the majority are unsatisfactory, as many as 45 people (75%), satisfaction with social relationships with others, the majority are unsatisfactory, as many as 37 people (61.67%), satisfaction with sexual life, the majority are very unsatisfactory, as many as 25 people (41.67%), satisfaction with support from friends, the majority are satisfactory, as many as 25 people (41.67%), satisfaction with current living conditions, the majority are so-so, as many as 30 people (50%), satisfaction with access to health servicesThe majority were so-so as many as 31 people (51.67%), satisfaction with transportation was the majority so-so as many as 18 people (30%).

5) Feelings refer to negative things in the last 2 weeks

Table 4.8. Frequency Distribution of Questionnaire Answers Based on Feelings Referring to Negative Things in the Last 2 Weeks

Feelings Refer To Negative Things In 2 The last week	f	Percentage (%)
Negative feelings that arise such as loneliness, despair, anxiety and depression		
Very good	2	3.33
Good	11	18.33
Mediocre	6	10
Bad	34	56.67
Very bad	7	11.67

Table 4.8 above shows that the patient's feelings refer to negative things in the last 2 weeks, the majority of which were bad, as many as 34 people (56.67%).

c. The patient's anxiety level before being given the deep breathing relaxation technique

Table 4.9. Frequency Distribution of Respondents Based on Anxiety Level Before Being Given Deep Breathing Relaxation Technique

Anxiety Level	F	Percentage (%)
Currently	28	46.67
Heavy	15	25
Very Heavy	17	28.33
Total	**60**	**100**

Based on table 5.9 above, it shows that the level of anxiety of patients before being given deep breathing relaxation techniques was mostly moderate, as many as 28 people (46.67%).

d. Patient anxiety levels after being given deep breathing relaxation techniques

Table 4.10. Frequency Distribution of Respondents Based on Anxiety After Being Given Deep Breathing Relaxation Technique

Anxiety Level	F	Percentage (%)
Currently	47	78.33
Heavy	11	18.33
Very Heavy	2	3.34
Total	**60**	**100**

Based on table 4.10 above, it shows that the level of anxiety of patients after being given deep breathing relaxation techniques was mostly moderate, as many as 47 people (78.33%).

e. Quality of Life of Patients Before Being Given Deep Breathing Relaxation Technique

Table 4.11. Frequency Distribution of Respondents' Quality of Life of Patients Before Being Given Deep Breathing Relaxation Technique

Quality of Life	f	Percentage (%)
Good	1	1.67
Bad	49	81.66
Very bad	10	16.67
Total	**60**	**100**

Based on table 4.11 above, it shows that the quality of life of patients before being given deep breathing relaxation techniques was mostly poor, as many as 49 people (81.66%).

f. Quality of Life of Patients After Being Given Deep Breathing Relaxation Technique

Table 4.12. Frequency Distribution of Respondents' Quality of Life of Patients After Being Given Deep Breathing Relaxation Technique

Quality of Life	f	Percentage (%)
Good	13	21.67
Bad	45	75
Very bad	2	3.33
Total	**60**	**100**

Based on table 4.12 above, it shows that the quality of life of patients after being given deep breathing relaxation techniques was mostly poor, as many as 45 people (75%).

Bivariate Analysis

Bivariate analysis was used to determine the relationship between anxiety and quality of life after being given deep breathing relaxation techniques in heart failure patients undergoing treatment at Sidikalang Regional General Hospital. The statistical test used to determine the correlation of anxiety with quality of life is the Chi Square test.

Table 4.13. Chi-Square Test of the relationship between reducing anxiety and quality of life after being given deep breathing relaxation techniques

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	61.571a	4	.000
Likelihood Ratio	18,933	4	.001
Linear-by-Linear Association	2.254	1	.133
N of Valid Cases	60		

The table above shows the Asymp.Sig value of 0.000 < 0.05, so it can be concluded that there is a significant relationship between reducing anxiety and quality of life after being given deep breathing relaxation techniques in heart failure patients undergoing treatment at Sidikalang Regional General Hospital.

CONCLUSION

Based on the data and analysis results that have been presented, the following conclusions can be drawn:

1. Characteristics of respondents: The majority of respondents are aged 55-74 years, 39 people (65%), based on education, the majority have high school education, 45 people (75%), the majority of respondents work as farmers, 42 people (70%), and the majority of respondents are male, 35 people (58.34%).
2. The level of patient anxiety before being given the Deep Breathing Relaxation Technique was moderate for the majority of 28 people (46.67%).
3. The level of patient anxiety after being given the Deep Breathing Relaxation Technique was moderate for the majority of 47 people (78.33%).
4. The quality of life of heart failure patients before undergoing deep breathing relaxation techniques was mostly poor, as many as 49 people (81.66%).
5. The quality of life of heart failure patients after undergoing deep breathing relaxation techniques was mostly poor, as many as 45 people (75%).
6. The Asymp.Sig value of 0.000 < 0.05 means that there is a significant relationship between reducing anxiety and quality of life after being given deep breathing relaxation techniques in heart failure patients undergoing treatment at Sidikalang Regional General Hospital.

REFERENCES

Aflahatinufus A, Sriati A, Shalahuddin I. Effectiveness of Hypnotherapy as an Intervention to Reduce Stress in Adolescents: Literature Study. J Psychiatric Nursing. 2022;10(2):245–56.

Arifudin NF, Kristinawati B. The Impact of Psychological Problems on the Quality of Life of Heart Failure Patients: Systematic Review. Heal Inf J Penelit. 2023;

Arkam JR, Arsal ASF, Sommeng F. Relationship of Heart Disease Risk Factors to Electrocardiography (ECG) Results in Emergency Nurses at Ibnu Sina Hospital. Fakumi Med JJ Mhs Kedokt. 2023;3(1):36–44.

Aryanor Z, Febriani R. The Effect of Cyberloafing on Work Procrastination in Employees. Psycho Holist. 2023;5(2):51–5.

Bannepadang C, Manginte AB, Pataban FS. Relationship between anxiety levels and coping mechanisms of congestive heart failure patients at Elim Hospital Rantepao in 2023. J Ilm Kesehat Promot. 2024;8(2):207–10.

Beauty RA. RELATIONSHIP BETWEEN STRESS, SLEEP QUALITY AND FATIGUE WITH QUALITY OF LIFE IN PATIENTS WITH HEART FAILURE IN THE HEART POLYCLINIC OF PADANG PANJANG REGIONAL HOSPITAL. Andalas University; 2022.

Burhan S, Erika KA, Said S. The Effectiveness of Progressive Muscle Relaxation in Reducing Anxiety: A Literature Review. Scientific J Nursing. 2022;8(1):33–40.

Díez-Villanueva P, Jiménez-Méndez C, Alfonso F. Heart failure in the elderly. J Geriatr Cardiol JGC. 2021;18(3):219.

Eka A, Beo YA, Danal PH, Crowa YRR, Mariati LH, Wahyuni W, et al. Providing Counseling, Deep Breathing Relaxation Techniques, 5 Finger Hypnosis, and Exercise for Elderly with Hypertension Experiencing Anxiety. Randang Tana-Journal of Community Service. 2023;6(1):1–7.

Gu D, Andreev K, Dupre ME. Major trends in population growth around the world. China CDC Wkly. 2021;3(28):604.

Harisa A, Wulandari P, Ningrat S, Yodang Y. The Effect of Murottal Therapy on Depression in Congestive Heart Failure Patients at the Integrated Heart Center of Dr. Wahidin Sudirohusodo General Hospital. Nursing World J Nursing and Health. 2020;8(2):269–76.

Imaduddin H, Hermansyah BA, Mutawadhi'Alfajri M. Classification of Death Due to Heart Failure Using the Logistic Regression Algorithm Based on Forward Selection. JIMP-Journal of Inform Merdeka Pasuruan. 2023;7(3):96–100.

Indah Batari Toja IBT. The Effect of Five Finger Hypnosis on Insomnia Levels in Adolescents Due to Gadget Addiction at SMA Bina Warga 1 Palembang in 2022. STIK Bina Husada Palembang; 2022.

Izzuddin A, Dinianty SF, Nazaahah Z. Literature Study: Factors Affecting the Quality of Life of Heart Failure Patients in Indonesia. J Ilmu Kedokt Dan Kesehat. 2020;7(1):381–92.

Jaarsma T, Hill L, Bayes-Genis A, La Rocca HB, Castiello T, Čelutkienė J, et al. Self-care of heart failure patients: practical management recommendations from the Heart Failure Association of the European Society of Cardiology. Eur J Heart Fail. 2021;23(1):157–74.

Kholidyah J, Khoirini F, Misniarti M, Hernawan D. Nursing Care for Mrs. E, a Diabetes Mellitus Patient with the Implementation of Deep Breathing Relaxation Techniques in the Internal Medicine Room of Rejang Lebong District Hospital in 2023. Poltekkes Kemenkes Bengkulu; 2023.

Kim S, Yang J. Factors influencing the stress of patients on hemodialysis. J Korean Acad Soc Nurs Educ. 2015;21(3):340–9.

Lukitasari M, Kusumastuty I, Nugroho DA, Rohman MS, Kristianingrum ND. Heart Failure: Independent and Multidisciplinary Care. Brawijaya University Press; 2021.

Mayfa RK, Handayani A, Batubara HJS, Putri SD. Factors Affecting the Level of Compliance in Stopping Smoking Habits in Coronary Heart Disease Patients. Anat Med JOURNAL|AMJ. 2024;7(2).

Mukhlasin R, Kusrini K, Wulandari A. Visualization of Excessive Social Media Use on Mental Health Through Expression Photography. Specta J Photogr Arts, Media. 2023;7(1):59–74.

Mulugeta H, Ayana M, Sintayehu M, Dessie G, Zewdu T. Preoperative anxiety and associated factors among adult surgical patients in Debre Markos and Felege Hiwot referral hospitals, Northwest Ethiopia. BMC Anesthesiol. 2018;18:1–9.

Mursyida E, Hotmauli H, Surya A. Health screening for the elderly at Lembah Sari, Rumbai Timur. Community Empower. 2023;8(3):337–40.

Ningrum SWD, Ayubbana S, Inayati A. Application of Deep Breathing Relaxation Techniques to Preoperative Patient Anxiety in the Surgical Room of General Ahmad Yani Hospital, Metro City in 2021. J Cendikia Muda. 2021;2(4):529–34.

Nugrahaeni A. THE ART OF LIVING WITHOUT BURDEN: Truly Achieving Calm and Peace in Life is Simple and Practical. Great Children of Indonesia; 2023.

Nugrahani CI. Reviewing the Quality of Life of the Elderly. NEM Publisher; 2023.

Nursita H, Pratiwi A. Improving Quality of Life in Heart Failure Patients: A Narrative Review Article. J Nursing Science. 2020;13(1):11.

Paat TCC, Erika KA, Saleh A. Effectiveness of Complementary Therapy in Improving Quality of Life in Heart Failure Patients: Systematic Review. J Keperawatan Muhammadiyah. 2020;5(2).

Pinilla JMG, Díez-Villanueva P, Freire RB, Formiga F, Marcos MC, Bonanad C, et al. Consensus document and recommendations on palliative care in heart failure of the Heart Failure and Geriatric Cardiology Working Groups of the Spanish Society of Cardiology. Rev Española Cardiol (English Ed. 2020;73(1):69–77.

Puspita HD, Puspawardhani G. Determination of New Workload Classification Based on Prediction of Blood Oxygen Levels by Considering Heart Rate, Body Temperature and Oxygen Consumption in Porter Service Workers. INFOMATEK J Inform Manaj and Teknol. 2020;22(2):89–100.

Ramadhanti PS. Guided Imagery for Trauma. Guepedia; 2022.

Rashid S, Qureshi AG, Noor TA, Yaseen K, Sheikh MAA, Malik M, et al. Anxiety and depression in heart failure: an updated review. Curr Probl Cardiol. 2023;48(11):101987.

Suadnah S, Karim A, Darmayanti W. THE EFFECT OF DEEP BREATHING RELAXATION TECHNIQUE ON REDUCING BLOOD PRESSURE IN HYPERTENSION PATIENTS IN PASIR SEMUT VILLAGE, RANCA GEDE VILLAGE IN 2022. J Ilm Kesehat Ar-Rum Salatiga. 2023;7(2):1–6.

Syifa N, Rahmayanti N, Yusetyani L, Hasmono D. Study of Lisinopril in Heart Failure Patients. KnE Med. 2023;259–69.

Tasalim R, Cahyani AR. Academic stress and its management. Guepedia; 2021.

Tsabedze N, Kinsey J-LH, Mpanya D, Mogashoa V, Klug E, Manga P. The prevalence of depression, stress and anxiety symptoms in patients with chronic heart failure. Int J Ment Health Syst. 2021;15(1):44.

Wahidah A, Sari SM. Analysis of nursing care for Mrs. A and Mrs. Sj with the application of deep breathing relaxation therapy to reduce blood pressure. Coping Community Publ Nurs. 2023;11(1):39.

Wahidin M, Agustiya RI, Putro G. Burden of disease and prevention and control programs for non-communicable diseases in Indonesia. J Epidemiol Kesehatan Indones. 2023;6(2):105–12.

Widiani E, Jannah KAM, Widodo D. Anxiety Response in Elderly Who Receive Deep Breathing Relaxation Therapy. J Nursing Widya Gantari Indones. 2024;8(1).

Zainuddin R, Fitri H, Arniyanti A, Mahmud Y, Nurbaiti N. Application Of Breath Relaxation Techniques In Combination With Dhikr Therapy On The Anxiety Of Preoperative Patients. J Ilm Kesehat Sandi Husada. 2023;12(1):61–7.